ACTA PALAEONTOLOGICA POLONICA

Osteohistology of hyperodapedontine rhynchosaurs from the Upper Triassic of Southern Brazil

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Acta Palaeontologica Polonica 60 (4), 2015: 829-836 doi:http://dx.doi.org/10.4202/app.00074.2014

The first osteohistological study focused exclusively on rhynchosaurs (non-archosauriform archosauromorphs), based on the hyperodapedontines *Teyumbaita sulcognathus* and *Hyperodapedon* sp., from the Upper Triassic of Southern Brazil, indicates a relatively rapid growth rate in early ontogeny shown by the fibrolamellar complex, with a change to slow intermittent growth during late ontogeny represented by parallel-fibred bone with several growth marks. Contrary to previous studies, which described a typical non-archosaur reptilian bone tissue pattern for rhynchosaurs, with growth marks extending across the entire cortex, we demonstrate that, in both studied taxa, the initial growth rate was faster in comparison to the later. This suggests that the ability of rapid growth at high rates was already present in basal non-archosauriform archosauromorphs.

Key words: Diapsida, Archosauromorpha, Rhynchosauria, Hyperodapedontinae, bone histology, growth pattern, Triassic, Brazil.

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